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THE  
PHYTOLOGIST.

A BOTANICAL JOURNAL.



*Ὁς ἐμγαλύνῃ τὰ ἔργα σου, Κύριε!—πάντα ἐν σοφίᾳ ἐποίησας.*

PSALM. cγ'. 24.

Benedicite universa germinantis in terra Domino; laudate et superexaltate  
EUM in secula.—*Hymn. iii Psalter. v. 76.*

LONDON:

WILLIAM PAMPLIN, 45, FRITH STREET, SOHO.

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## PLANTS OF DOVER, &amp;c.

*List of Plants collected about Dover, Walmer, Folkestone, and Sandgate, from the middle of May to the beginning of July, of the past year, 1860. By H. C.*

## FILICES.

Only the following common species were observed :—*Lastrea Filix-mas*, *Polystichum aculeatum*.

*Athyrium Filix-fœmina*. On banks near St. Radigund's.

*Asplenium Ruta-muraria*. On a wall at the foot of the Castle hill, Dover; also on the wall leading to the entrance of Walmer Castle.

*Scolopendrium officinale*. Common on banks, but only the normal form.—I did not meet with any of the varieties so frequent at Torquay.

*Pteris aquilina*. Not common, and very stunted.

## GRAMINEÆ.

*Phalaris arundinacea*, *Anthoxanthum odoratum*, *Phleum pratense*, *Arrhenatherum avenaceum*.

*Melica uniflora*: Combe Wood. *Milium effusum*: the same locality.

*Koeleria cristata*, Pers. Shakspeare's Cliff.

*Avena præcox* (Aira, L.). Downs near St. Radigund's.

*Poa annua*, *P. nemoralis*, *P. pratensis*.

*Catabrosa aquatica*. Ditch near Charlton church, with *Glyceria aquatica* and *G. fluitans*.

*Sclerochloa maritima*, Lind. (?) Very abundant on the cliffs within reach of the sea spray.—The locality given in the British Floras is "salt-marshes."

*Sclerochloa rigida*, Link. Common, especially on the beach at Walmer.

*Briza media*, *Cynosurus cristatus*, *Dactylis glomerata*, *Festuca pratensis*.

*Bromus asper*. Grounds of Walmer Castle.

*Bromus sterilis*, *B. mollis*, *Lolium perenne*, *Hordeum murinum*.

I devoted little time to the study of the Grasses, and none to that of the *Carices* and other *Cyperaceæ*, etc.





## ALISMACEÆ.

*Alisma Plantago.*

## LILIACEÆ.

*Agrophis nutans.* Abundant in all the copses.—We also found a variety with pure white flowers, a more delicate plant than the common Bluebell.

*Allium ursinum.* Plantation at Kersney Abbey.—This I found in May 1849, but was unable to ascertain if it still grew there, as the grounds are now closed to visitors.

## ASPARAGACEÆ.

*Convallaria maialis.* Westwood, about sixteen miles from Dover.—For this locality I cannot vouch, not having been able to get so far. A basketful of the plants was brought to us for sale by a decent old peasant woman, who, in answer to our inquiry as to where she had obtained them, named Westwood, assuring us that they grew there in abundance.

## TRILLIACEÆ.

*Paris quadrifolia.* Combe Wood and plantations at Waldershare. Often with five, and occasionally with six leaves.

## ORCHIDACEÆ.

*Orchis ustulata.* East Cliff, near the Cornhill C. G. station (June).

*Orchis fusca.* Combe Wood (June 8th).

*Orchis Morio.* Meadows.

*Orchis (Anacamptis, Rich.) pyramidalis.* On chalk downs.

*Gymnadenia conopsea, Rich.* Also on sunny chalk downs, with the last-named.

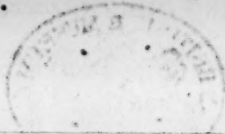
*Habenaria chlorantha.* Copse on the road to St. Radigund's.

*Ophrys muscifera (Myodes).* Small plantations to the right of Waldershare church.

*Ophrys apifera.* Shakspeare's Cliff (July).

*Ophrys aranifera.* Exceedingly plentiful on Shakspeare's Cliff, and still more so on the waste ground near the railroad at the bottom of the steps cut in the side of the cliff, beyond the tunnel.

*Spiranthes autumnalis,* I gathered on the downs leading to St. Radigund's, Sept. 3, 1849.





*Listera ovata.* Common in all the copses.

*Cephalanthera grandiflora.* Plantation to the left of the road in going to Waldershare, and woods of Kersney Abbey, at the root of the Fir-trees.

#### IRIDACEÆ.

*Iris foetidissima.* On banks along the Folkestone road, and in Kersney Wood, etc. (not in bloom).

#### ELÆAGNACEÆ.

*Hippophae rhamnoides.* Waste ground at the foot of Shakspeare's Cliff, and on ascent to Abbott's Cliff.—In both places I only found plants with male flowers.

#### EUPHORBIACEÆ.

*Euphorbia helioscopia.* Common in waste ground.

*Euphorbia Peplus.* Common.

*Euphorbia amygdaloides.* Abundant in woods and copses.

*Mercurialis perennis.* Not uncommon.

*Mercurialis annua.* A troublesome weed in cultivated ground.

#### URTICACEÆ.

*Parietaria officinalis.* On old walls, and on the East Cliff, growing luxuriantly in the chalk.

#### POLYGONACEÆ.

Of the following genera, *Polygonum*, *Rumex*, *Chenopodium*, there were many representatives, but not sufficiently in flower to be determined, with the exception of—

*Chenopodium Bonus-Henricus*, which grew about the Priory, Poulton, and St. Radigund's farms.

*Beta maritima.* Abundant along the shore and on the cliffs east and west of Dover.

*Atriplex.* Several species (*varieties* according to Bentham), but these also, not being in flower, could not be determined.

*Obione (Halimus) portulacoides*, Wall. Little saltmarsh between Shakspeare's and Abbott's Cliffs.

*Salicornia herbacea.* In the same place, not in bloom.

## CALLITRICHACEÆ.

*Callitriche verna*. Var.  $\beta$  of the Illustrated Handb. B. P. In the Dour and other streams.

## PLANTAGINACEÆ.

*Plantago media*, *P. major*, *P. lanceolata*, and *P. Coronopus*, all very abundant. I looked in vain for *P. maritima*, which is so common on the south Devon coast.

## PLUMBAGINACEÆ.

*Armeria maritima* grows in large patches on the sandy cliff near Sandgate. Not observed on the chalk.

*Statice spathulata*. On the cliffs on both sides of Dover.—Round the margin of the saltmarsh at the foot of Abbott's Cliff, already mentioned, a *Statice* formed quite a turf, but whether *spathulata* or *Limonium* I was not able to determine, as it was only in bud. According to Bentham, one is only a variety of the other.

## PRIMULACEÆ.

*Primula veris* and *P. vulgaris*. Both more abundant and luxuriant than I have ever seen them elsewhere. The latter especially decked every hedgebank and copse with innumerable tufts of its pale yellow stars, occasioning a constantly recurring delight to me, for it does not figure in the Belgian Flora, and it was many years since I had seen it blooming "à l'état sauvage."

*Primula elatior*? was brought to us from the neighbourhood of Mount Ararat (near Dover), where I was told it was common. This is the plant known locally as the "Cowslip," while *P. veris* bears the euphonic appellation of "Horse-buckles."

*Lysimachia nemorum*. In copses.—The only one of its genus met with.

*Anagallis arvensis*. Cornfields and waste ground.

## VERBENACEÆ.

*Verbena officinalis*. Common, but not in flower.

## LABIATÆ.

*Mentha aquatica*. Marshy ground beyond River, and in the Dour.

*Salvia verbenaca*. On the right bank of the road leading from the Arch Cliff Fort to Shakspeare's Cliff.—This is the only locality where we met with it.

*Origanum vulgare*. Common everywhere on the chalk.—Just coming into flower when I left.

*Thymus Serpyllum*. Common.

*Calamintha Acinos*, Gaud. (*Thymus*, L.). About Guston and Langdon, etc.

*Glechoma hederacea*. Under hedges and banks, etc.

*Lamium Galeobdolon*. Copses, common.

*Galeopsis Tetrahit*. Copse to the right of the Folkestone road.

*Stachys Betonica*. Abundant also in copses and borders of woods.

*Ballota fœtida*. Hedges and roadsides; common.—Not in flower.

*Ajuga reptans*. Copses and banks.—The finest specimens I ever saw; some had spikes of flowers exceeding a foot in length.

#### SCROPHULARIACEÆ.

*Veronica hederæfolia*. Exceedingly common; trailing along all the banks, and overspreading the cornfields.

*Veronica agrestis*. Not so abundant.

*Veronica Buxbaumii*. Also infesting the cultivated fields.—One of the commonest weeds on the road from River to St. Radigund's.

*Veronica arvensis*. Heights at the back of the Castle, and left of the road to Shakspeare's Cliff.

*Veronica montana*. Border of Combe Wood, on a bank near St. Radigund's Abbey; also near Mount Ararat, about half a mile beyond St. Radigund's, on a shady bank, with Ferns.

*Veronica Anagallis*. Marsh beyond River, on the road to Alkham.

*Veronica Beccabunga*. In the Dour, at the back of Charlton.

*Scrophularia aquatica*. In the marsh near River.

*Linaria Cymbalaria*. On the Castle wall, Walmer; also on a wall at Buckland.

*Pedicularis sylvatica*. In a field near St. Radigund's Abbey.

*Rhinanthus Crista-galli*. Meadows.

*Bartsia Odontitis*. Cornfields.

*Euphrasia officinalis*. Chalk downs.



## OROBANCHACEÆ.

*Orobanche caryophyllacea*. I suppose this species is peculiar to Kent, as that county is named as its habitat in all our Floras. It is certainly very abundant, almost covering the piece of waste ground between the Shakspeare's and Abbott's Cliff tunnels, and extending up the side of the latter nearly to the top. It was so matted together with *Lotus corniculatus* and *Galium Mollugo*, that I had some trouble to find out on which it was parasitic. After several ineffectual attempts with the trowel, I at length succeeded in digging out one with the *Galium* attached to it, thus leaving no doubt of its identity. It was new to me.

## VERBASCACEÆ.

*Verbascum Thapsus*. On the cliffs at Sandgate, and about Dover, not in bloom (July).

## SOLANÆÆ.

*Solanum Dulcamara*. Common in hedges round Dover, but especially luxuriant on the shingly beach at Walmer, where it grew in patches, the branches trailing on the ground and so intertwined as quite to form a matting. The flowers too were in denser heads, and of a darker purple, than I had ever observed them when growing in hedges.

## BORAGINACEÆ.

*Borago officinalis*. A variety with pure white flowers (very pretty) on the cliff at Folkestone, near one of the flights of steps leading up from the Sandgate road to Albion Villas.

*Lycopsis arvensis*. Waste ground close to the Sandgate turnpike.

*Symphytum officinale*. A variety with blue flowers, similar to those of the *Pulmonaria* of our gardens. It was growing among the grass at the foot of the enclosed part of the cliff, between Folkestone and Sandgate. Thinking we had stumbled on a grand prize, my youthful companion climbed over the invisible fence, at the risk of being prosecuted for trespass, to secure it. We were much disappointed to find on examination that, excepting in brilliancy of colour, it did not in any way differ from the common Comfrey.

*Myosotis palustris*. In all the streams.

*Myosotis intermedia* (*arvensis*, Hoff.). Fields and waste places.

*Myosotis collina*. Folkestone cliffs (May).

*Lithospermum arvense*. Fields.

*Lithospermum officinale*. On the left bank of the road from Dover to Deal, about halfway between the two places.

*Echium vulgare*. Extremely abundant on the chalk cliffs.

#### CONVOLVULACEÆ.

*Convolvulus Sepium*. Common in the hedges, not in bloom (July 6th).

*Convolvulus Soldanella*. In the sand, close to the road, at the foot of the Folkestone cliffs.

#### GENTIANACEÆ.

*Erythraea Centaurium*. On the downs on both sides of Dover, just coming into flower (July 6th).

*Gentiana Amarella*. Downs near St. Radigund's, etc. (Sept. 1849).

*Chlora perfoliata*. Abundant in the chalk at Dover and Walmer. Not observed at Folkestone, where the soil is sandy.

#### CAMPANULACEÆ.

*Campanula Trachelium*. Combe Wood.—This and *C. rotundifolia* were the only representatives of this family met with.

#### COMPOSITÆ AND DIPSACEÆ.

*Carlina vulgaris*. Cliffs east and west of Dover (not in flower July 6).

*Carduus nutans*. Common on the chalk.—On a part of Shakespeare's Cliff which has slipped several yards below the level, we noticed the variety with white flowers, also recorded among the Yarmouth plants ('Phytologist' for February, 1860).

*Carduus acanthoides*. Meadows at the back of Buckland.

*Carduus tenuiflorus*. Abundant about Dover and Folkestone.

*Carduus palustris*. Marshy ground near River.

*Carduus acaulis*. Not unfrequent; just coming into flower (July 6).

*Centaurea Scabiosa*. Common and luxuriant.—*Centaurea nigra*, the more usual species, was not met with, or was overlooked, probably from not being in bloom.

*Anthemis arvensis*. Clover-fields on St. Margaret's road, and border of field near Combe Wood.

*Anthemis Cptula*. Very common.

*Pyrethrum maritimum*. Abundant on the East Cliff, and on the beach between Dover and Folkestone.

*Artemisia maritima* (?). I frequently met with a plant of this family, not in bloom, which differed from the common Mugwort in the shape and colour of its leaves, which were not *white* and *tomentose* at the back. I cannot be sure I have named it correctly, as I was not able to determine it by flowers or fruit.

*Senecio aquaticus*. Marsh, near River.

*Eupatorium cannabinum*. Side of the cliff leading down to the piece of waste ground between the two tunnels already mentioned; not in flower.

*Hypochaeris radicata*. Folkestone and Walmer, etc.

*Thrincia hirta*. Everywhere.

*Tragopogon pratensis*. Not unfrequent on the chalk.

*Lactuca* (*Prenanthes*, Sm.) *muralis*. Walls of St. Radigund's Abbey.

*Crepis fetida*. Some very diminutive specimens by the side of the footpath along the beach at Walmer, in company with *C. taraxacifolia*, but easily distinguished by its unopened, nodding flower-buds, whilst the latter was already in seed (June 28th).

*Crepis taraxacifolia*. Common on banks and borders of fields, and so much taller and stouter than I am accustomed to see it on the banks of the Meuse, that careful examination alone convinced me they were one and the same species.

*Dipsacus sylvestris*. On banks and in copses, where it grows to an immense height.—Not in bloom.

*Scabiosa Columbaria*, abundant; and *Knautia arvensis*, round Dover.

#### VALERIANACEÆ.

*Centranthus ruber* grew on a bank at Walmer, but seeing it in the garden, as well as on the walls of the Castle, I cannot consider it otherwise than an escape from cultivation, though it is said to grow wild in Kent.

#### RUBIACEÆ.

*Asperula Cynanchica*. Edge of Shakspeare's Cliff, and elsewhere on the chalk.



*Rubia peregrina*. Among stones lying between the waste ground already alluded to and the beach, several patches of it, just coming into bloom.

## CAPRIFOLIACEÆ.

*Viburnum Lantana*. Hedges and copses.

*Sambucus Ebulus*. In the interior (at the back of the farms) of St. Radigund's Abbey.

*Lonicera Periclymenum*. Common.

## ARALIACEÆ.

*Adoxa Moschatellina*. Frequent.

## UMBELLIFERÆ.

*Sanicula europæa*. Plentiful in all the copses.

*Pimpinella magna*. Guston and West Langdon.

*Pimpinella Saxifraga*. East Cliff.

*Bunium flexuosum*. Combe Wood.

*Feniculum officinale*. One tuft on the St. Margaret's road; in greater quantity on the Folkestone cliffs, not in bloom, but unmistakable from its aromatic odour.

*Crithmum maritimum*. Dover cliffs, forming in places little plantations.

*Angelica sylvestris*. Coombe Wood, and other shady places.

*Pastinaca sativa*. Borders of fields.

*Daucus Carota*. Most luxuriant on the East Cliff. I did not observe *D. maritimus*, which I had found on the rocks at Torquay.

*Torilis nodosa*. On a bank near the turnpike between Folkestone and Sandgate; also to the right of the road from the Arch Cliff Fort to Shakspeare's Cliff.

*Petroselinum segetum*. Cornfields on the St. Margaret's road. —We only found two plants, but, had time permitted, further search in the same direction would probably have led to the discovery of more.

*Smyrniolum Olusatrum*. One of the commonest weeds on the chalk round Dover.—It was coming into flower by the second week in May, and the last was an unusually backward spring, so I should think June, in ordinary years, would be late for it.

Of the Rose family I only found the common genera and spe-

cies that grow everywhere, and it was too early in the season for me to prick my fingers with the Brambles.

## CRASSULACEÆ.

*Sedum acre*. Exceedingly abundant on the beach at Walmer, and very rich in colour.

## LEGUMINIFERÆ.

*Sarothamnus scoparius*. Ascent to Abbott's Cliff.

*Genista tinctoria*. Shakspeare's Cliff.

*Ulex europæus*. Chalk downs.

*Ononis arvensis*. Borders of fields, etc.

*Anthyllis Vulneraria*. Abundant everywhere on chalk.

*Lotus corniculatus*, var. *γ. villosus*. Heights near the Barracks: 1849.

*Medicago maculata*. Cultivated as a fodder plant on the cliffs at Folkestone, where it grows luxuriantly, but certainly wild by roadsides, and in waste ground at Dover and Deal.

*Medicago denticulata*. Folkestone cliffs.

*Trifolium scabrum*. Walmer, very starved specimens, the plot of ground where they grew having been eaten down by cattle.

*Vicia bithynica*. Folkestone cliffs, May and June.

*Lathyrus macrorrhizus*. Combe Wood.

*Lathyrus maritimus*. Beach at Walmer, almost within reach of the sea-spray.—There were many patches of this, the most beautiful of our wild Peas, and it was in full bloom (June 28th) when we fell in with it. Those who have had similar experiences, will readily understand the feeling of pleasure with which I contemplated this new acquisition to my collection.

*Lathyrus Nissolia*. Abundant on the Cliff at Folkestone, growing with *V. bithynica*, and *L. Aphaca*, the three forming such a lovely nosegay as to call forth an exclamation of surprise and delight. The Grass-Pea also grew plentifully at Sandgate, and was peculiarly brilliant in colour.

*Hippocrepis comosa*. Frequent about Dover.

*Onobrychis sativa*. Shakspeare's Cliff and elsewhere, much cultivated.

## CRUCIFERÆ.

*Cheiranthus Cheiri*. Covering the East Cliff, which was quite

gay with it, all through the month of May; also on the old walls of the Priory Farm.

*Barbarea vulgaris*. Copse and fields near Waldershare church.—By no means so stout and coarse, nor of such dark green leaves, as my Meuse specimens, owing probably to difference of soil and situation. Our Belgian plant is abundant on the dry, sunny limestone rocks along the valley of the Meuse.

*Barbarea præcox*. In a field at the back of Charlton, and on the Folkestone cliffs.

*Arabis hirsuta*. Borders of cornfields, and on the East Cliff.

*Brassica oleracea*. Cliffs, East and West.

*Brassica campestris*. Fallow fields.

*Sinapis nigra*. Folkestone cliffs, where it quite replaced the Charlock.—We searched for it in vain on the chalk, round Dover.

*Diplotaxis tenuifolia*, *D. muralis*. Both frequent on the East and West Cliffs.

*Lepidium Draba*. On the Cliff at Folkestone, and on the left bank of the road, near the turnpike.

*Senebiera Coronopus*. Roadsides, and along the Parade.

*Crambe maritima*. On the beach at Walmer.—There was a little wooden hut near, with an enclosure in which there were some plants of the Kale. But whether this sort of garden had been made to secure the Kale, or whether those on the beach were an escape from it, I cannot say.

*Raphanus Raphanistrum*. Cornfields on the Folkestone road.

#### PAPAVERACEÆ.

*Papaver somniferum*. I give this on the authority of the young relative who accompanied me in all my excursions, and who wrote me that she had discovered it, after I left, in walking from Dover to Folkestone, by the beach. I am unable to give the exact spot.\*

*Glaucium luteum*. All along the coast, from Folkestone to Walmer, where it is particularly abundant, growing quite to the water's edge.

\* The locality, or rather, the unusual station for this plant, is beyond Lydden Spout, on the way from the houses on the cliff. The place is generally known by the name of East Wear Bay. We particularly noticed this as a good lesson in botanical geography.



*Chelidonium majus*. In all the villages around Dover, as well as near the Water-works on the Castle Hill.

#### RESEDACEÆ.

*Reseda Luteola*, *R. lutea*. Frequent.

#### CELASTRACEÆ.

*Euonymus europæus*. Hedges and copses.

#### POLYGALACEÆ.

*Polygala vulgaris*. Plentiful on the banks along the St. Margaret's road. I also found, in a field near St. Radigund's, a variety which closely resembles *P. depressa*, Wender, if not identical with it.

Of the *Mallows* and *Geraniums*, I met with only the common kinds, excepting a variety of *Erodium cicutarium*, with white flowers, with a dark spot at the base of the petals, which we found on the cliff just at the entrance of Sandgate.

#### LINACEÆ.

*Linum angustifolium*. Abundant on the bank to the right of the road from Walmer Castle to St. Margaret's.

#### CARYOPHYLLACEÆ.

*Silene nutans*, var.  $\beta$ , Smith. Grows in profusion on the East and Shakspeare's Cliffs, the air being scented by the fragrance of its starry white flowers towards evening when they expand.—It differs from our Belgian *S. nutans* by its larger size and greater hairiness.

*Silene inflata*. A common weed in cornfields.

*Lychnis diurna*. Copses and hedge-banks. We found the variety with pale flesh-coloured flowers in a copse at the Walderha.

*Lychnis vespertina*. Tolerably abundant in cornfields and on banks.

*Lepigonum marinum*. On the cliffs.

*Arenaria trinervia*. Shady banks.

*Cerastium arvense*. Heights near the Castle.

## FRANKENIACEÆ.

*Frankenia levis*. Little saltmarsh at the foot of Abbott's Cliff.

## RANUNCULACEÆ.

*Clematis Vitalba*. In all the hedges.

*Anemone nemorosa*. Plentiful in the copses.

*Ranunculus circinatus* (*Batrachium*, Reich.). In the Dour, at the back of Buckland.

The Flora of Dover does not appear rich in plants of this family. I noticed none but the most common species.

*Omitted in their proper places.*

*Pyrethrum Parthenium*. On the walls of Kersney Abbey, near the gateway.

*Agrimonia Eupatoria*. Near Poulton Farm, and ascent of Abbott's Cliff.

## ISOETES HYSTRIX.

*Recent discovery of Isoetes Hystrix, by GEORGE WOLSEY, Guernsey; in a Letter to the Editor.*

This little plant I found in damp spots on L'Ancriisse Common, in this island, in June 1860.

The following description of the species and its localities is compiled from Grenier et Godron, 'Flore de France,' and from Lloyd's 'Flore de l'Ouest de la France.'

*Isoetes hystrix*, Durieu in litt., Bory, Compt. rend. Acad. Sc. vol. xviii., January, 1844, etc.

Root tapering, black, furrowed, surrounded by white, shining, 2-3-toothed scales. Lloyd says three-toothed, Gr. and God. two-toothed, sometimes with an intermediate short tooth. Leaves linear, pointed, scarcely furrowed, slightly convex on the outer side with prominent nervation, contiguous at the base, and forming a bulb, spreading above, one or two inches long. Macrosporangies finely reticulate, microsporangies truncate-aculeate.

Grenier and Godron state that it grows in dry mountainous or hilly pastures in the Isle of Corsica, and never in inundated places; abounds in moist pastures, and on the seashore, Bonifacio, etc.

Lloyd gives a full and particular account of the habits of this interesting novelty, viz.: "This species grows in patches (*pieds isolés*), not forming a turf or sward, on dry sandy flats, and seated on small tumps or little hillocks like mole-hills. The disposition of its leaves, which spread out and form a circle, serves to distinguish it from the plants with which it is associated, for example, from *Romulea Columnæ* (*Trichonema Columnæ*), and *Scilla autumnalis*, which frequently are found in the places where this plant grows." This intelligent author further adds: "Although the ordinary stations or habitats for this species be exposed grassy flat places, I have often seen it growing on the sands at the base of dunes (small hills or sandy banks near the sea), where the plant is larger (*plus robuste*). In Belle Isle I have seen it on several steep hills of no great height, exposed to the south, and surrounded with *Romulea* (*Trichonema*) and *Ophioglossum lusitanicum*. It grows on the south-western coast of France, from the Loire to Cape Finisterre. It is perennial, and is in fructification from March to May.

It will probably hereafter be detected in other parts of the Channel Islands, and we hope that the above brief, simple description of the plant and of its habits and localities will assist in its identification those who may be so fortunate as to find this interesting novelty.

---

#### ARENARIA BALEARICA.

"Semper ego auditor tantum, nunquamne reponam?"

"Strange! all this difference should be

'Twixt tweedle-dum and tweedle-dee."

In the Annual Address, printed in our first monthly issue for this current year, 1861, there is some allusion to the subject of the present article, which was then under consideration; and an engagement was then made, that the matter should be fully discussed on the earliest fitting occasion. This promise is now to be redeemed by the present performance.

In this case the pen is drawn, not to attack, but to defend; and it will not be used for inflicting castigation, but for maintaining the truth. It is a compulsive, and neither a voluntary



nor an agreeable task which is now to be fulfilled. It is seldom that the 'Phytologist' assumes the functions of a *censor morum*, and these duties, when undertaken, are discharged in the spirit of meekness, kindness, and charity, with a vivid consciousness of human infirmity, and with the sincere desire of dealing honestly and candidly, neither suppressing any important fact, nor setting "down aught in malice."

The earnest desire of the writer is to be a healer of breaches, a peacemaker; to write in the conciliatory mood, not to exasperate nor alienate, but to reconcile. If justice demands firmness in the refutation of unjust accusations, moderation requires gentleness in the style or diction. *Suaviter in modo, fortiter in re*, will be the rule in the following composition.

I will not incur the jealousy and hatred of mankind by assumptions of superiority, nor by the affectation of philosophico-phrenological discernment, nor by any superciliousness of language, nor by dictatorial dogmatic assertions. These are the weak instruments of minor mediocrities, who mimic and parody the affectations of genius, and, by their feeble efforts to obtain notoriety, render themselves only objects of ridicule and commiseration to the rest of mankind. While they are laughed at for their egregious self-conceit, and the airs of importance which they assume, they are, by the more feeling and sensible portion of humanity, pitied for their weakness, for the defects of their education, the want of moral training and discipline, and for the faithlessness of their friends, who wanted the courage and the love to tell them of their infirmities and to admonish them to beware of the seductive allurements of self-glorification.

I further beg to intimate to those readers of the 'Phytologist' who have not seen the extract subjoined, that this is *one* of the *twin cases* supplied to Professor De Candolle, to convince him "that our eminent botanists are not sound reasoners." With the other case the present deponent has no concern; he has only to justify Mr. Sim, the correspondent who transmitted the fact, and the Editor who gave it publicity.

Another preliminary remark may be made on the author's reference to his "own readers" needing no apology for his "troubling them with this second warning instance." His readers might possibly save him the trouble of apologizing, but the readers of the 'Phytologist' might ask why he did not publish

his objection to the report of the discovery, in the same paper in which the original account first appeared. This would have been both a courteous, customary, and satisfactory mode of procedure. If his object was merely the detection of error and the publication of truth, why was not the 'Phytologist' used as the medium for contradicting the "pseudo-discovery," as he calls it? The writer of this article will not attempt to surmise the author's motives for his unusual and uncourteous proceeding; but he cannot help inferring that truth was not the sole object, and in this inference he believes that all those who are best acquainted with both the implicated parties will coincide with him.

It is well known to all our readers that Mr. Watson, or anybody else, might have challenged the statement about the *Arenaria*; and, that if a contradiction or a counter-statement had been sent to the 'Phytologist,' that contradiction would have been made public. But the author of the article knew that there was a sting in its tail, which would have been extracted; the poison would have been squeezed out of the serpent's fangs; therefore another medium was selected. We make no complaint about this; for the author of the 'Cybele' is the very last man in England whose aid is desirable in connection with the 'Phytologist.' Rather, he is the only botanist known whose room is better than his company. But for all this, he is welcome to state a fact or correct an error in our pages. He may say in justification that he knew the Editor of the said periodical would not give publicity to his article because it was condemnatory of his editorial vigilance; but this is a mere pretence, for the Editor has entered articles that were far from being complimentary to himself. But it is now time to let Mr. W. tell his own story, in his own elegant diction; let the tail go with the hide, the bee's bottom, sting and all; the readers of this journal shall have served up for their delectation an effusion which is just about as remarkable for its offensive personality as it is for the hobbling style of its composition.

"*ARENARIA BALEARICA not Native in Scotland.*—So much mischief may be done by would-be-thought discoverers sending inaccurate reports to editors, who are themselves not duly prepared by the geographico-botanical knowledge requisite for distinguishing between the probable and the improbable in local botany, that I can feel no apology needful to my own readers for here troubling them with a second warning instance; one fortunately

arrested in time to prevent another most improbable species becoming permanently incorporated in our lists of truly British plants. It is a fitting accompaniment to the preceding case of the *Diervilla*, resembling that one in the risk of a garden plant becoming thereby recorded for the future as if really a native production of Scotland. In May last, 1859, I received from the Editor of the 'Phytologist,' New Series, a note to this effect:—

" 'I enclose an *Arenaria*, sent this morning from Scotland. It is no state of *A. serpyllifolia*, and it does not agree with Babington's description of *A. ciliata*. It also differs from *A. norvegica* as described by Babington. *A. multicaulis* is unknown to me. Will you be so good as give me your opinion of it when you have time?'

" Writing here from recollection, my reply was immediate, and to the effect, that if reported to me from the Mediterranean, instead of Scotland, I should unhesitatingly have named the plant *A. balearica*; that I knew of no boreal species to which it could be referred or related; and that the alleged locality of Scotland was geographically improbable, unless I was wrong as to the name. In the next month's number of the 'Phytologist' the following brief notice was given of this pseudo-discovery:—

" 'Mr. Sim has sent us a specimen of what he thinks may be *Arenaria balearica*, a plant new to Scotland. He has been advised to send a specimen to Mr. Babington.' ('Phytologist,' 50, 192.)

" So far, the readers of the 'Phytologist' were in a very likely way of being misled into supposing this Mediterranean *Arenaria* a wild plant new to Scotland; no intimation of a garden origin being stated or suggested, even while the idea of it being *A. balearica* is attributed to the finder himself. But in the same periodical for November then following, Mr. John Sim records a 'botanical ramble,' made to the 'Hill of Moncrieffe,' where he discovers *Scrophularia vernalis*, *Achusa sempervirens*, and other garden species, which no geographical botanist believes to be native in Scotland. In the course of his ramble he visits the 'pleasure-grounds and flower-garden of Sir Thomas Moncrieffe,' and there he finds, 'about the middle of June,' the plant new to Scotland, as mentioned in the subjoined extract from his ramble:—

" 'On the wall of an old fruit-house, I saw a patch of *Arenaria balearica*, of which I gathered a few specimens; how or by what means it got there I cannot tell, only there it is, and none knows how.' ('Phytologist,' 55, 327.)

" The question now arises, where did the previously found specimen come from? that which was sent to London in May, and recorded in the June number of the 'Phytologist,' as a plant new to Scotland? Very significantly, that first record is omitted from the Index to the 'Phytologist' for 1859, page 385, where Mr. Sim's confession of the fruit-house locality for the species is referred to only. And considering how many localities



for improbably native plants have been already reported on the same authority, it may become matter of some importance to future botanical topographers, to ascertain whether this case of the *Arenaria balearica* is a fair sample of the rest? Also, how far it may be held an exhibition of editorial care and competence, in announcing new British plants or new British localities? While saying that I cannot place scientific reliance upon Mr. Sim's reports, or upon the phytological records of them, it would be most unfair not to disclaim any insinuation against Mr. Sim personally, on the score of moral truthfulness. I can well believe him writing with perfect sincerity of intention, while imperfect in his reports, and unsound in his conclusions from alleged facts; the records being made worse against him by want of editorial discernment." (Supplement to 'Cybele,' p. 38.)

The first sentence is a long one, containing several propositions, hanging rather loosely together, more remarkable for intricacies and involutions than for that clearness and logical precision which might be looked for in the composition of an author who takes credit for more philosophical acumen than he allows to any other botanist, yea, more than to all of them put together.

Instead, however, of analyzing this ponderous period of the learned Theban's, it will be easier for our readers to scrutinize the facts, which are like Sir John Falstaff's halfpenny roll to a gallon of sack, or like some wretched daub of a painting in a gaudy and clumsy frame. We fear exhausting the attention, or, it may be, the patience of our readers; and we also regret the space occupied by so worthless a topic. For what advantage will it be to a single individual, whether this *Arenaria* grow in Scotland or not. Will the publication of its discovery be subservient to human happiness or to the amelioration of mankind? Only in an imperceptible degree. Its effect on society will be unfelt; and it will be forgotten, even by botanists, in the space of half a decade of years. The fact itself, in the grand totality of scientific discovery, is like the infinitesimal globules of the homœopathic practitioner, like a grain of strychnine in a hogshhead of water. But the reputation of men is a more important concern than is the discovery or fancied discovery of a south European plant on one of the bleak hills of Caledonia; and it is to this part of the subject that the candid consideration of our readers is humbly requested.

"The mischief that would be done" (more, the much mischief

has been prevented, the ill weed has had its blossom nipped off) was hatched by two persons, viz. by Mr. Sim, the "would-be-thought discoverer," and by the Editor, who was not sufficiently prepared (duly prepared) by "geographico-botanical knowledge" to deal with such difficult questions as the publication of a notice of a plant strayed from the Continent. We ask our readers, if Mr. H. C. W. deserves so well of society as to have a monopoly of all botanical discoveries? Or is he alone to have the privilege of promulgating such scraps of information? No such pretensions will be admitted. Mr. W. may make discoveries; and, like the barn-yard fowl, which cackles loudly and warns the whole homestead when she has laid an egg, he may sound his own applausive trumpet-note, and beg the entire scientific family of mankind, and womankind also, to listen to his swan-like song of self-complacency. And why not? Gentle reader, we gainsay him not; he will never be blamed by us for celebrating his own praises; we rather pity him, for it is universally credited that when a man humbles himself to speak and write in commendation of himself, he has lost all his friends.

But why will not Mr. W. let us have the same liberty which he takes to himself? "Would-be discoverers!" Does not Mr. W. wish to be a discoverer, to be enrolled among the benefactors of the human race, with Columbus, with Bacon, with Harvey, with Newton, Jenner, Watt, and Stephenson? Yes, truly; but this discovery of Mr. Sim's is no discovery; it is a *pseudo-discovery*; a discovery and a false discovery, an entity and a nonentity.

On this we join issue, lead a proof, request a fair hearing, and subsequently we will call on the jury for a triumphant acquittal.

Mr. W. has perversely misrepresented the case. In the first place, no discovery was either claimed or wished for by Mr. Sim; for, from the tenor of his note, printed in our January number, p. 32, 1861, he disclaims its discovery altogether. Let this pass. How do you, Mr. Reviewer, exculpate the Editor whose skill in geography is not nearly up to the mark? Very easily. Mr. Watson may profitably remember the old proverb, "They that live in glass houses should not throw stones." Mr. W. edited the 'New Botanist's Guide,' and in this work I find that he confounds Brompton in Middlesex with Brompton in Kent. Like Captain Fluellin, he is as hasty in his temper as he is in judgments founded on defective comparison; or he speaks and writes

in a hurry, and, like the choleric Welshman, he is weak in the ratiocinative faculty. He inferred that as there is a Brompton in Middlesex and a Brompton in Kent, "a river in Wales and a river in Macedonia; the name of the Welsh river is Wye, but the name of the other is out of his prains: but it is so like as his fingers to his fingers: there is salmons in both." Mr. Watson's reasoning is as amusing as the Welsh captain's. As "there is salmons in both rivers," so there is the plant *Geranium pyrenaicum* at both the places called Brompton. Possibly there is; but Sir James E. Smith, who is quoted as the authority for the Kentish locality, does not bear out the assertion, for he limits it to the Middlesex Brompton.

Again, the learned author of the 'Cybele,' in his remarks on the altitude of *Hypericum Elodes*, states, vol. i. p. 253, "Mr. Bowman observed it (*H. Elodes*) at one thousand yards of altitude in North Wales, and I think it was seen by myself rather higher on Dartmoor, in Devon." That is, as one of our correspondents expressed it, the accurate geographer saw the plant not on *terra firma* but *in nubibus*. No part of Devonshire is within one thousand feet of the elevation where it was seen by our accurate phyto-geographer.

If any sharp-witted reader say, this is after all but a lame excuse for the somnolency of the Editor, it may be retorted that the accuser should enter into court with clean hands. This Mr. Watson cannot do, for his blunders are egregious and innumerable. But there is more to be said in justification of the Editor, if the court, both judge and jury, will have patience to hear it.

But, abstaining from all banter and badinage, we mean to assert that this discovery is a real and not a pretended one. Mr. W. himself saw the plant, and other botanists examined it and identified it as the plant bearing the name set at the head of this article. It was never observed there before, or rather, it was not recorded before; therefore it was legitimately entitled to a notice as a discovery *new* to Scotland. The author, Mr. W., is disposed to chuckle over the good effects of his timely warning, like the fowls—*anser*es ornithologists call them—which by their cackling awoke the sleeping Roman sentinels, and thus preserved the Capitol from the nocturnal surprise of the Gauls. The plant has already obtained no little notoriety as a plant *new* to Britain;



whether it will ever get a permanent place in our list of truly British species, time alone, the universal discoverer, will show. It will probably have to pass through the improbable, the uncertain, the doubtful, the colonials, and the denizens, before it arrive at the exalted rank of plant-citizenship.

I intended to offer a few remarks on the term or phrase "improbable species," but I will, to save time and space, postpone these, and confine my discourse rather to things than to words, except as the latter are representatives of facts or of activities. I will not however pass over the flagrant breach of literary or social etiquette in the giving of publicity to the Editor's note; although there is nothing in it of which he needs to be ashamed, yet he probably would not have written it if he had entertained the slightest suspicion that his correspondent was not an honourable man, and would regard it as a private communication of a strictly privileged nature. I, as a friend, counsel the Editor of the 'Phytologist' not to trust Mr. Watson hereafter. He has been once deceived: this is Mr. W.'s fault. If he is deceived a second time, the fault will be his own.

The first portion of this literary and scientific curiosity has now been criticized, and the result is that Mr. W. is contradicted, and we hope is also convicted, to the satisfaction of any reasonable jury, of a double misrepresentation.

But there is more evidence forthcoming. Listen or look again, most patient of readers. "The readers of the 'Phytologist' were in a very likely way of being misled into supposing this Mediterranean *Arenaria* a *wild* plant new to Scotland." Observe, *lector benevolentissime*, that the word *wild*, underscored, is not ours, but Mr. Watson's. We wrote "new to Scotland," and we mean to maintain the absolute and incontrovertible accuracy of this; but we will not answer for the epithet *wild*, simply because it is not ours, and we have only to justify what we have written, but are not called upon neither to admit nor to disown what Mr. W. has written in our behalf. The original report is admitted and justified, but not burdened with Mr. Watson's addition.

Read on, gentle reader. "No intimation of a garden origin being stated or suggested, even while the idea of it (its) being *A. balearica* is attributed to the finder himself." We never heard of this *Arenaria* as a garden, or ornamental, or a cultivated

plant, and how could we hint or suggest its garden origin? We knew that it was found in or about a garden, but so are many plants notoriously wild. We might have suggested what is not true, and a *suggestio falsi* is as bad as a *suppressio veri*. We must be on our guard; "Evil communications corrupt good manners." Nothing was hinted, and nothing was suggested, and therefore nobody was misled into a false supposition. Besides, there are Balearic plants which are also British plants; and there are even more *Arenarias* than this one, which are common to both the British and the Balearic Isles. How could it be affirmed with certainty that this is *not* one of these common plants? There is positive evidence that it grew there, and there is only negative evidence against its being a probable native. Surely the testimony of two or three or four witnesses is to be received as a proof much more credible and cogent than the mere opinion of a botanical geographer, who finds plants growing in or among the clouds, one thousand feet above the highest hills of Devon, and that with his eyes open. Surely his unsupported supposal, when he is about half a thousand miles from the spot, is not a very convincing kind of negative proof.

But it appears that the attribution of the name of the plant to the finder is a fault. It is no such thing. Can nobody identify plants but Mr. Watson? There are two mistakes here. Mr. Sim was not the original discoverer or finder of the plant. Yet it appears from his own statement that he had the patience to puzzle out the name, and was able to identify the plant by comparing it with a series of *Arenarias* described in his herbal. Surely this is very creditable to our correspondent who sent the notice for publication.

But the amount of Mr. John Sim's offences against botanical geography is not yet told. Listen, most courteous reader! "In the same periodical for November then following,"—mark the accuracy of the statement and the elegance of the phraseology,—"Mr. J. S. records" another "botanical ramble, made to the hill of Moncrieffe, where he discovers *Scrophularia vernalis*, *Anchusa sempervirens*, and other garden species which no geographical botanist believes to be native in Scotland." This is the head and front of Mr. Sim's offendings. If they had been found by Mr. Watson in a locality where they had not hitherto been noticed, he would have taken the credit of the discovery.

We will not answer for the creed of geographical botanists, for if like Mr. Watson's belief, it is a very loose one; but as we do not know what it is, and have never yet heard that they have any general formula of faith in plant-distribution, the less said about it the better. But we can say that, so far as we know, the plants above-named, viz. the *Anchusa* and the *Scrophularia*, are as much, if not more, wild in Scotland as or than in England, and probably as in France to the bargain. We will present botanico-geographers with this fact, and wish it may do them much good.

We hope our readers will now acquit the Editor of the 'Phytologist' of both intentional and ignorant mistakes; and consequently he expects not merely a verdict of acquittal, but a finding of wilful misrepresentation against his accuser.

But he hopes they will not be discharged by the judge until the writer's opinions about wild and tame plants has been submitted to them, and in these his opinions he will neither compromise the 'Phytologist' nor its Editor. He will merely give his opinion, and will support it both by evidence and illustration.

It may be taken for granted, by the general consent of all mankind, botanists not excepted, that all plants, like all animals, are divisible into two classes, *wild* and *tame*. There may be, indeed there are, a few of both animate and sentient beings that are both tame and wild. The ass is an example among beasts, and the Crab among plants. As a logician may say, every herb and animal which is not tame is wild, and every one which is not wild is tame, with the exception of the small intermediate class which assumes both these distinctive characters.

From these premises it is inferred that as the *Arenaria balearica* is not a *tame* or cultivated plant, nor a plant having an intermediate character—it is a wild plant. It can scarcely be called an escape from cultivation, for it belongs to a genus quite unsuited for the practice of the florist's art. That it grows on a tool-house is no valid reason for denying its *wildness*; the Chickweed and Groundsel grow on garden-walls, and sometimes among the choicest flowers, and their *wildness* is uncontested. It is not urged against its claims to spontaneity, if not to nativity, that it was planted on the tool-house, or that it has become semi-naturalized like the Snapdragon. This latter plant has existed among us for centuries, probably for thousands of years; the *Arenaria*,



like the *Aremonia*, has taken us by surprise. But the fact of its occurrence on a tool-house and in a garden, though surprising, is not to be ignored. It is a fact, and an interesting fact, although it may be a puzzle to addle-headed plant-geographers. It may be supposed to have been introduced among seeds, or it may have reached these islands in packages, or it may have reached us by swimming in currents, or have been transported by birds, or been attached to the hairy skins of beasts,—all favourite and popular modes of plant-distribution. But who can say with any certainty that the tool-house in the garden at Moncrieffe is the only place where it grows and where it may ultimately be discovered? The *Aremonia* has been already detected in other localities in Perthshire, and in Lancashire also, if fame is to be believed. It is surely not impossible for the *Arenaria* to obtain a wider location than that of a small spot on a brick wall! Who can gainsay the possibility of this wider distribution? It may be discovered in other parts of Scotland, or in Ireland, or even in England itself, the refuge of the destitute. There is positive evidence that it has been found; there can only be negative evidence against the probability of its being found in future.

The candid critic starts a query, viz.: "Where did the previously-found specimen come from?" Observe the style, curious reader! "That which was sent to London in May, and recorded in the June number of the 'Phytologist' as a plant new to Scotland?" The answer to be given is plain and straightforward. It came from the tool-house so often mentioned. There is no mystery, nor concealment, nor affectation, about this point. Everybody agrees here. Mr. Watson does not even affect to doubt this part of the relation, but he subjoins a very significant remark, viz.: "Very significantly, that first record is omitted from the Index to the 'Phytologist' for 1859, p. 385, where Mr. Sim's confession of the fruit-house locality for the species is referred to only."

There is some truth in this part of Mr. Watson's statement. The first notice, viz. that on p. 189, being only two lines and a half, was overlooked when the Index was compiled, and this omission is supplied in the Index to Vol. IV. for 1860. The significance of this fact was originally of small dimensions, and it has gradually diminished, and has now totally disappeared.

The fact was significant, and it may now be left to the discretion of our readers to decide whether it was more significant of the *mala fides*, the faithlessness, of the Editor, or of the *malus animus* of its discoverer.

The senseless twittle-twattle contained in the last paragraph of this impertinent curiosity is as singular and as rare a specimen of harmless invective as it is of human imbecility. The would-be ratiocinative author contradicts himself, and innocently gives an answer to his own cavil. That it is utterly without meaning I will not assert, for its intention evidently was to hurt one who had never wronged him either by word or deed. The *animus* of the period is plain as a pike-staff, but it is like the feckless dart of the aged, feeble Priam, on the shield of the armed, warlike son of Achilles,—it only recoils on the thrower. It is as defective in moral dignity as it is in grammatical structure and logical deduction. It is, on the whole, just such an effusion as might originate in a mind clouded and darkened by the fumes of the incense of flattery burnt under the nostrils of one greedy of praise, or on the altar erected to self-idolatry.

Where is the causal reasoning, the philosophical inference, or logical definition, in the last paragraph of this pitiful exhibition of petty spitefulness, p. 40.

Courteous reader, be so good as to compare these two quotations, which are submitted to thy candid consideration:—

Mr. W. writes, "I cannot place scientific reliance"—(what is scientific reliance?)—"upon Mr. Sim's reports or (nor) upon the phytological records of them." Or, in plainer terms, that fact was no fact, but a figment of Mr. Sim's invention, and the phytological record of them is to be placed in the same category. This is most emphatically denied, and the accuser is hereby challenged to prove what he has asserted. Again: "It would be most unfair not to disclaim any insinuation against Mr. Sim personally, on the score of moral truthfulness." Look on that, and look on this. I cannot believe him, says Mr. Watson, and yet on the score of moral truthfulness he is unimpeachable! "Nescio quo teneam Proteu."

Surely this is a pregnant example of the effect of "addiction to psychological studies" on the student himself, in qualifying him for a discoverer and a teacher of truth.

But it is the most childish of all childish twaddle to separate moral from scientific truth. Both kinds are relative, so far as humanity is the revealer of the truth, whether it be a truth of science or a truth of morals; no finite being can possess truth absolutely. This is an attribute of Deity alone.

What more would Mr. Watson know about the plant, or about the space it occupied on the wall of the tool-house? Why did he not ask Mr. Sim for a more detailed report of the circumstances under which he saw it? Mr. Sim would have told him that the patch of *Arenaria balearica* was not much more than as much as he could cover with the crown of his hat; the number of the stems (flowering stems) was probably from fifty to sixty, or perhaps seventy or eighty,—a few more or a few less could not be of very great consequence, even to a botanical geographer! Mr. Sim knew that it was a south of Europe plant; this he learnt from his herbal; but he knows also that there are scores of plants common to the British Isles and to the Mediterranean, to both shores, both the European and the African. How was he or anybody else to know that this was not one of those common plants?

But this is not all. "Considering how many localities for improbably native plants have been already reported on the same authority, it may become a matter of some importance to future botanical topographers to ascertain whether this case of the *A. balearica* is a fair sample of the rest?" This is where the shoe pinches; it is a matter of some importance to Mr. Watson to discredit facts which he did *not know*, and for which he was ashamed to be indebted to observers whom he vilified, though just as trustworthy as he himself.

It may be a matter of some importance to future plant-geographers to know that the localities reported by Mr. Sim have been seen by hundreds of botanists, and a record of their observations, confirmatory of Mr. Sim's, has appeared in contemporary periodicals. The 'Phytologist' has a backer in a local periodical published at Perth. Also, a report of a recent botanical excursion to these very localities, last June (1860), was sent to the Editor of the 'Phytologist,' but, for reasons not necessary to be advanced here, was not accepted for publication.

We would not insult our readers by remarks on "improbable species" and "garden species," which no geographical botanist



believes to be native in Scotland. Some of our readers understand that Mr. Watson's sense of "*native*" is not universally accepted by botanists, but surely the testimony of more than a hundred personal observers is not to be refuted by the opinion of one would-be plant-geographer.

As this article has already exceeded the limits within which the Editor wishes to confine such discussions, it must be concluded with a few brief but not trivial remarks on the subject of *Arenaria balearica*.

1st. The little plant itself, the innocent cause of this contention, is not worth one-hundredth part of the expense incurred in the denial and justification of its claims to appear in a phytological record of the occurrences of a season, or among the productions of a country. The plant, economically, is of no value whatever; it is neither fit for food, nor for physic, nor ornament. Nobody but a botanist would go out of his way to pluck it, and by all botanists, except Mr. Watson, it will be utterly forgotten in a short time. The latter-named individual may have cause to remember it.

Again, in the 2nd place, the little plant is not only worthless, and will speedily be forgotten, and, consequently, is not deserving of so large a space in the annals of science, a matter to be regretted by economists, by the disciples of Adam Smith, but in addition to this, it has been made a subject of cavil and of uncharitable remarks; much envy, and no little hatred and uncharitableness, have been elicited by or through its instrumentality. This is very much to be deplored. The property wasted in the controversy, foolishly thrown away, is not so precious as the time, the temper, the patience, and the charity, which are recklessly squandered on such foolish disputes, which will certainly never be settled, because their settlement is impossible, and if it were, it would be of no practical use to any human creature.

The only excuse the 'Phytologist' can offer to its indulgent readers, for trespassing so far on their property and their patience, is, that the controversy was unsought, and would have been gladly shunned; even after it was decided that our pacific tactics were to be abandoned for a brief period, a flag of truce was transmitted to the enemy, and was treated with disdainful contempt. Hence we had no alternative but to enter the arena

of controversy; the point of honour forbade our declining what was tantamount to a challenge. *Jacta est alea*, as Cæsar said on crossing the Rubicon. We have thrown down our gage; let truth and honour be the umpires, and we are indifferent about the issue. If we are truthless and dishonoured, we deserve to be foiled, and if so, we promise to admit our error; but it will be time enough to confess when we have been proved to be in the wrong. For the present, we justify whatever has been done in the matter. More than this, we condemn what Mr. Watson has done, and tell him publicly that he ought to be ashamed of his ways, and amend them. We have stated the truth, so far as it was known to us. That Mr. Watson has stated what he did not know to be true, and insinuated what he might easily have known to be false, we do most solemnly and confidently assert.

If we are to abide faithful to the principles on which the *New Series* of this journal was established, and in conformity to which it has hitherto been conducted, we must give publicity to all facts which are reported by correspondents on whose fidelity and accuracy reliance ought to be placed. Our pages, as has been repeatedly stated, are at the service of every one who has any strictures to offer, or any animadversions to make, on any communication whatever which is printed in the 'Phytologist.'

It is hoped that our readers will be satisfied with what we have done to justify our correspondent and ourselves. There has been no display of wounded vanity, egotism, or *amour propre*, in our defence; we have guarded ourselves against acerbity of language as well as against bitterness of spirit. The miserable being who is continually spitting venom, scattering firebrands, whose indignation seethes like the hot steam of a boiling cauldron, scalding, scorching, and piercing to the heart every one within reach, is an object of sincere commiseration, but not of ribald ridicule.

The most valuable reproof and rebuke, when administered in the acrimonious spirit of calumny and detraction, are lost; the object, which should be peace and goodwill, is sacrificed to the means; the latter assume an undue prominence, and the result is that the breach, instead of being healed, is made wider than ever. We hope we have now satisfied all reasonable persons that our intentions now, as heretofore, are pacific. We are the

decided enemies of contention, and we now desire to bid adieu to all hostilities, both literary and scientific, henceforth and for ever.

## BOTANICAL NOTES, NOTICES, AND QUERIES.

### WAHLENBERGIA HEDERACEA.

(From a Correspondent.)

In reference to the above-named plant, about which you request information, I cannot say that it was ever either collected or seen by me on Keston Common; but I was told by the late Mr. Peete that it grew on the bog below the springs which are generally known as the source of the Ravensbourne. These springs are opposite to the gate of Holwood Park, and not above one hundred yards from the road. Inside the gate of the park there are the remains of both the rampart and fosse of a Roman encampment.

In looking over my notes and an interleaved copy of the 'New Botanist's Guide,' or rather the Botanist's New Guide, to the localities of rare British plants, I perceive that in June, 1834, I found this elegant little plant in a bog in Epping Forest, at High Beech, between Loughton and Epping. I have heard that it has been seen in several other parts of the Forest, but I have not seen it.

In Waterdown Forest, adjoining Groombridge, in Sussex, I have seen it very plentiful.

It also abounds in St. Leonard's Forest, near Horsham, and in Tilgate Forest, on the left of the Brighton road, near Peaseporridge Gate, a little beyond Starvemouse Moor.

Here it grows in slightly moist places, similar to those where you and I saw it on the table-land of the Berwyns, on the left of the road between Bala and Llangynog; but in St. Leonard's Forest it grows most abundantly on the dry soil in the wood, about the mouths of the rabbit-holes.

It is not *uliginal* in that part of St. Leonard's Forest; neither does it, by its distribution, evince any preponderating partiality for the west of our island; and in Europe it is found on the eastern shores of the Adriatic.

Its altitude on the Berwyns, where it grows, as above-mentioned, not more than two miles from Llanderfel, is probably more than one thousand feet.

W. P.

### A NEW MATERIAL FOR THE MANUFACTURE OF PAPER.

The following exceedingly interesting communication on a novel kind of straw paper is based upon an article in the columns of the 'Breslauer Gewerbeblatt,' September, 1860:—

"Among the many endeavours that have been made, both in ancient and modern times, to procure a fit substitute for paper, one at length has been crowned with success. Recent experiments have proved Indian Corn to possess not only all the ordinary qualities necessary to make a good article, but to be in many respects actually superior to rags, hitherto the only material found to be really available



for that purpose. The discovery to which we allude is a complete success, and indeed may be expected to exercise the greatest influence upon the price of paper within a very short time. Indian Corn, it is true, cannot be grown except in countries of a certain degree of temperature—at least, not with the prolific result of warmer climates; yet the plant is of frequent occurrence all over Europe, and can be easily cultivated to a degree more than sufficient to satisfy the utmost demands of the paper market. Besides, as rags are likely to fall in price before long, owing to the extensive supply of material resulting from this new element, the world of writers and readers would seem to have a brighter future before it than the boldest fancy would have imagined a very short time ago. This is not the first time that paper has been manufactured from the blade of Indian Corn; but, strange to say, the art was lost, and required to be discovered anew. As early as the seventeenth century, an Indian Corn paper manufactory was in full operation at the town of Rievi, in Italy, and enjoyed a world-wide reputation at the time; but with the death of its proprietor the secret seems to have lapsed into oblivion. The manifold attempts subsequently made to continue the manufacture were always baffled by the difficulty of removing the flint and the resinous and glutinous matter contained in the blade. The recovery of this process has at last been effected, and is due to the cleverness of one Herr Moritz Diamant, a Jewish writing-master in Austria. Having busied himself for some time in experiments on Indian Corn, the ingenious discoverer has at length been rewarded with the desired results of his labour; and a trial of his method on a grand scale, which was made at the Imperial manufactory of Schlögmühle, near Glognitz (Lower Austria), has completely demonstrated the certainty of the invention. Although the machinery, arranged as it was for the manufacture of rag paper, could not, of course, fully answer the requirements of Herr Diamant, the results of the essay were wonderfully favourable. The article produced was of a purity of texture and whiteness of colour that left nothing to be desired; and this is all the more valuable from the difficulty usually experienced in the removal of impurities from the rags. Knots and other inequalities of surface, so frequent in the ordinary paper, and which give so much trouble in printing, the new product is entirely free from, and this without the material undergoing any special process to attain the desired end.

"Another immense advantage, and this in an economical point of view, is the reduction of the steam power required in the manufacture by *one-third* of its present amount, in consequence of the material being reduced to pulp by chemical, and not, as at present, mechanical agency. The present proprietor of the invention is Count Carl Octavio zu Lippe Weissenfeld, who has bought it from the originator, and from several experiments deduced the following results:—

"1. It is not only possible to produce every variety of paper from the blades of Indian Corn, but the product is equal, and in some respects even superior, to the article manufactured from rags.

"2. The paper requires but very little size to render it fit for writing purposes, as the pulp naturally contains a large proportion of that necessary ingredient, which can at the same time be easily eliminated if desirable.

"3. The bleaching is effected by an extraordinarily rapid and facile process, and, indeed, for the common light-coloured packing paper the process becomes entirely unnecessary.

"4. The Indian-corn paper possesses greater strength and tenacity than rag paper, without the drawback of brittleness so conspicuous in the common straw products.

"5. No machinery being required in the manufacture of this paper for the purpose of tearing up the raw material and reducing it to pulp, the expense, both in point of power and time, is far less than is necessary for the production of rag paper.

"Count Lippe having put himself into communication with the Austrian Government, an Imperial manufactory for Indian-corn paper (*Maishalm-papier*, as the inventor calls it,) is now in course of construction at Pesth, the capital of the greatest Indian Corn growing country in Europe. Another manufactory is already in full operation in Switzerland; and preparations are being made on the coast of the Mediterranean for the production and exportation on a large scale of the pulp of this new material."

Let us express a fervent hope that a great traffic will arise in this cheap though precious material, and that English vessels will before long be freighted with shiploads of books and papers *in futuro*. We see no reason, however, why the material might not be grown in large quantities in many, especially the warmer parts of England. In Brandenburg, with its indifferent soil, and where the temperature is certainly not higher on the average than that of Great Britain, Indian Corn, though a novel introduction, may now be seen on many a sandy acre rearing up its broad leaf-blades to a height of half-a-dozen feet or upwards. What an era seems here to be opening for the future of cheap literature! In this one invention lies, perhaps, the antidote for all the evils occasioned by the non-removal of the paper duty.

## BARNABY GOOGE.

In the last number of the 'Phytologist' there was an extract from Barnaby Googe, *misprinted Goorge*, relating to *Buck-wheat*, or *Beech-wheat*. The work referred to is entitled, 'The whole Art and Trade of Husbandry, contained in four books, *enlarged* by Barnaby Googe, Esq., printed in London, 1614, by Y. S., for Richard Moore.' It appears from Mr. Googe's epistle to the reader, that the four Books of Husbandry were set forth by Master Conrade Heresbach, a great and learned counsellor of the Duke of Cleves, but put into English by Googe, and altered and increased with his own readings and observations, joined with the experience of sundry of his friends. I do not collect what part of this work, thus put into English, is Heresbach's, and what Googe's. The work is valuable and very interesting to all who desire to know something of husbandry and gardening at that early period, ordering of orchards and woods, *treatment of cattle, poultrie, and bees*. I should like to know more about the said Conrade Heresbach; probably some of the contributors to the 'Phytologist' can enlighten me.

S. BEISLY.

## INDIGENOUS PLANTS.—MYRTLE, LAUREL, CYPRESS.

Mr. George E. Frere, in 'Notes and Queries' for September, 1860, refers to these plants as the badges of the Scottish clans, Campbell, Graham, and M'Dougall, and says they are the only apparent exotic plants in the list of clan badges; this list is given in Haydn's 'Dictionary of Dates.' Mr. Frere says the Campbells' badge is *Myrica Gale*, or Dutch Myrtle, a British plant, and not an exception to the rule he has heard, that the badges of all the clans were plants indigenous in Scotland; but if the badges of Graham and M'Dougall are the plants known in the South by the names of Laurel and Cypress, they still remain exceptions to the rule.

I think the Editor of the 'Phytologist' can answer these questions, and we may be enlightened upon the subject of indigenous plants; for it appears that the clanships of Scotland originated in the time of Malcolm II., about the year 1008. Is there anything inconsistent in saying that these plants grew in Scotland at that period, or do the names signify other plants which grew there?

S. B.

## A LARGE PEAR-TREE. (See 'Phytologist,' vol. iv. p. 369.)

The tree described below, if not larger, is probably more productive; but we have in stock a notice of a Pear-tree, a genuine English production, which is probably bigger, certainly more productive, than both. The 'Nymphe,' a provincial journal, gives an account of a Pear-tree at the village of Amphion-vers-la-Rive, near Evian, in Sardinia, which is one of the sights of the neighbourhood. Its trunk is said to be about eleven feet in circumference at the height of a man from the ground, and its altitude about sixty feet. Once in three years it bears such an enormous amount of fruit that the branches have to be supported by strong iron supports. The pears are beautiful in appearance, but extremely disagreeable in taste, and are used for making cider, of which, in 1816, they are said to have yielded 1848 litres, or about 400 gallons, which fetched 540f.; this year the crop gave 2000 litres, but the value of the cider is only half what it was in the former year. It is calculated that the number of pears the tree produces in a full year is about 124,000, and a dinner-party of 150 could be easily accommodated under the shelter of its branches.

## ORIGIN OF SPECIES.

We have seen noticed in your journal some startling assertions, taken from the natural history of the 'Vestiges of Creation,' respecting the transformation of Barley into Wheat; but I find that some of our ancient writers tell us of things quite as strange. For instance, Dr. William Bulleyn, in his 'Book of Simples,' written in 1562, fol. 29, says, "Wheate will turn and degenerate out of his kind, and be changed into Darnel: specially in weate [wet] years; so saith Matthiolus, in Dioscorides, lib. ii. c. 78. I have seen the like in a field named Helly, in a town called Hells-holl, in Suffolk."

S. B.

VERTICAL RANGE OF *HYPERICUM ELODES*.

(From a Correspondent.)

Please tell me if there be any part of Dartmoor more than a thousand yards high. See 'Cybele,' vol. i. p. 253, in remarks on the range and altitude of *Hypericum elodes*. "Mr. Bowman observed it (*H. elodes*) at one thousand yards of altitude in North Wales, and I think it was seen by myself (the author) rather higher, on Dartmoor, in Devon." W. P.

[Our correspondent is referred to the 'Phytologist' for October, 1860, where he will see, on the authority of a recent historian of Devon, that the extreme elevation of Dartmoor is 2090 feet, considerably under the altitude where it (*H. elodes*) was seen by Mr. Bowman in North Wales, and still more under that where the learned author of the 'Cybele' thought he saw it on Dartmoor, in Devon. In the latter county the plant appears to have been seen in *nubibus*.]

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*Communications have been received from*

George Wolsey, with a specimen of *Isoetes hystrix*; J. S. Mill; John Sim; John Lloyd; Thomas Moore; William Pamplin; Dr. Lawson.

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